

# Math 140 – Trigonometry - Spring 2014

## SYLLABUS

Professor: Eric Lehtonen  
Phone: 355-6522  
e-mail: [eric1158@yahoo.com](mailto:eric1158@yahoo.com)  
eric.lehtonen@imperial.edu  
Office: 2763  
Office hours: MW 17:00-18:00  
TR 12:00-13:00

**Calculators: The TI-30.**

**Text: Trigonometry: Lial, 10<sup>th</sup> ed.**

**Grading: There will be 4 exams and one final exam. Please note the dates in the class schedule below.**

**Tests: 60%**

**Final 30%**

**Homework 10%**

**Homework: Homework will be assigned daily.**

**Attendance: Students not attending the first day of class will be automatically dropped. Students missing more than one week worth of classes, dating from when the student first enters the class will be dropped.**

**Any student with a documented disability who may need educational accommodation should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible.**

## **COURSE/CATALOG DESCRIPTION:**

Right angle trigonometry and applications, unit circle trigonometry, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, solving triangles using the Laws of Sines and Cosines, and polar coordinates.

## **MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C":**

Upon satisfactory completion of the course, students will be able to:

1. Define the six trigonometric functions using right triangle and unit circle definitions.
2. Express angles in degrees and radians.
3. Graph trigonometric functions, including those involving vertical and horizontal translations.
4. Solve triangles using the Law of Sines and Law of Cosines, including ambiguous cases.
5. Verify trigonometric identities, including sum and difference formulas, half-angle and power-reducing formulas.
6. Define and graph inverse trigonometric functions.
7. Solve trigonometric equations.
8. Graph polar and equations.
9. Solve application problems.

## **STUDENT LEARNING OUTCOMES:**

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Solve quadratic equations by factoring, completing the square, and quadratic formula. (ILO2)
2. Solve equations involving radicals. (ILO2)
3. Recognize and graph equations of conic sections. (ILO2)
4. Solve three by three linear systems by elimination or/and substitution. (ILO2)
5. Solve an application involving exponential functions. (ILO2, ILO5)

# Lecture And Test Schedule

## **Week 1**

Jan 21 **Introduction** 1.1-1.2

Jan 23 1.3-1.4

## **Week 2**

Jan 28 2.1-2.2

Jan 30 2.3-2.4

## **Week 3**

Feb 4 2.5

Feb 6 3.1-3.2

## **Week 4**

Feb 11 **Test 1**

Feb 13 3.3-3.4

## **Week 5**

Feb 18 4.1

Feb 20 4.2-4.3

## **Week 6**

Feb 25 4.4

Feb 27 Review

## **Week 7**

Mar 4 **Test 2**

Mar 6 5.1

## **Week 8**

Mar 11 5.2

Mar 13 5.3

## **Week 9**

Mar 18 5.4

Mar 20 5.5

## **Week 10**

Mar 25 5.6

Mar 27 6.1-6.2

## **Week 11**

Apr 1 6.3-6.4

Apr 3 7.1

**Week 12**

Apr 8 **Test 3**

Apr 10 7.2

**Week 13**

Apr 15 7.3

Apr 17 7.4

**Week 14**

Apr 22 **Spring Break**

Apr 24 **Spring Break**

**Week 15**

Apr 29 8.1-8.2

May 1 8.3-8.4

**Week 16**

May 6 Review

May 8 **Test 4**

**Week 17**

May 13 Review

May 15 **Final Exam**